

### What We Claim

1. A dual polarised antenna comprising at least first and second substantially planar Vivaldi antenna elements having active portions for receiving or radiating signals from a direction forward of the antenna, the antenna elements having mutually intersecting planes and having phase centres of the active portions substantially co-located, and respective antenna element feeds coupled to respective antenna elements at a position to the rear of the active portions and displaced from an axis extending through the phase centres and the intersection of the planes of the antennas.

2. An antenna as claimed in claim 1 wherein the antenna element includes an antenna feedline connected to the antenna element feeds at the position displaced from the axis.

3. An antenna as claimed in claim 2 wherein the antenna feedline crosses the axis.

4. An antenna as claimed in claim 3 wherein the antenna feedline comprises a stripline section and a twinline section.

5. An antenna as claimed in claim 1 wherein the element comprises a feed flare and an end flare.

6. An antenna as claimed in claim 5 wherein the element includes a substantially constant slot section disposed between the feed flare and the end flare.

7. An antenna as claimed in claim 1 wherein the feedline includes a parallel section substantially parallel to the axis.

8. An antenna as claimed in claim 7 wherein the parallel section of the first element has substantially the same length as the constant slot section of the other  
5 element.

9. An antenna as claimed in claim 1 wherein the locus of effective phase centres of the elements are co-located.

10. An antenna as claimed in claim 1 wherein the antenna elements are joined by mutually engaging formations.

10 11. An antenna as claimed in claim 10 wherein the mutually engaging formations include slots made in the elements.

12. An antenna as claimed in claim 11 wherein the elements are formed by substrates and metallised layers.

13. An antenna as claimed in claim 1 wherein the first and the second  
15 elements have substantially matching end flares.

15. Radiowave receiving apparatus including an antenna as claimed in claim  
1.

16. Radiowave transmitting apparatus including an antenna as claimed in claim 1.